

Citation for published version:

Beauchamp, MR, McEwan, D & Waldhauser, KJ 2017, 'Team building: conceptual, methodological, and applied considerations', *Current Opinion in Psychology*, vol. 16, pp. 114-117.
<https://doi.org/10.1016/j.copsyc.2017.02.031>

DOI:

[10.1016/j.copsyc.2017.02.031](https://doi.org/10.1016/j.copsyc.2017.02.031)

Publication date:

2017

Document Version

Peer reviewed version

[Link to publication](#)

Publisher Rights

CC BY-NC-ND

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Team Building: Conceptual, Methodological, and Applied Considerations

Mark R. Beauchamp, Desmond McEwan, & Katrina J. Waldhauser

The University of British Columbia

The Version of Record of this manuscript has been accepted for publication and is available in *Current Opinion in Psychology*, <https://doi.org/10.1016/j.copsyc.2017.02.031>

Abstract

Team building has been identified as an important method of improving the psychological climate in which teams operate, as well as overall team functioning. Within the context of sports, team building interventions have consistently been found to result in improvements in team effectiveness. In this paper we review the extant literature on team building in sport, and address a range of conceptual, methodological, and applied considerations that have the potential to advance theory, research, and applied intervention initiatives within the field. This involves expanding the scope of team building strategies that have, to date, primarily focused on developing group cohesion.

[2218 Words]

Introduction

Teams are a pervasive feature of sports. In many instances, athletes participate and compete in highly interdependent teams, and even those who compete in so-called ‘individual sports’ often spend considerable time with other teammates in training and competition with those interactions having a direct bearing on successful individual and team goal pursuits [1]. Understanding the determinants of team effectiveness represents a pressing area of inquiry questions within the field of sport psychology. When coaches or team managers in sport are charged with getting their teams to maximize their potential there are two broad starting considerations. As Collins, author of ‘*Good to Great*’, articulated the first step is to “get the right people on the bus, the right people in the right seats, and the wrong people off the bus” [2, p. 41]. In other words, this involves selecting the right personnel and placing them in the right positions to perform relevant roles and responsibilities. Invariably members of sports teams will be selected based on a range of physical (e.g., strength, speed, coordination) and psychological (e.g., leadership, resilience, personality) qualities. Having (hopefully) selected the right people, given the individual qualities that they possess, the second major consideration is to foster a sense of unity whereby the whole is greater than the simple sum of its parts. This involves ‘developing’ or ‘building’ the team; otherwise known as *team building*.

Team building has been described as “a method of helping the group to increase effectiveness, (b) satisfy the needs of members, or (c) improve work conditions” [3, p. 13-14]. Based upon the work of Carron and colleagues [4,5], team building interventions have largely focused on developing a sense of group cohesion. Cohesion involves the extent to which a group is united in pursuit of its instrumental task-related and/or social activities [6]. A basic tenet of

deriving team building interventions on building cohesion, is that if team members are able to foster a sense of unity, or togetherness, this exerts a catalyzing function in bolstering individual members' efforts (increased motivation), directing them towards common goals, and improving team performance outcomes [4, 5, 7].

Team Building Interventions: The Evidence

So how effective are team building interventions in sport? In an attempt to answer this question, Martin, Carron and Burke [8] conducted a meta-analytic review of team building interventions in sport settings. Several findings are worthy of particular note. First, the results revealed a medium-to-large effect for team building interventions in relation to measures of performance (Hedges $g = .71$), which suggest that team building interventions generally work and support salient team effectiveness outcomes. Those team building interventions within the Martin et al. meta-analysis [8] were also found to result in large improvements in team-member cognitions ($g = .80$). Interestingly, however, those team building interventions resulted in small effects on social cohesion ($g = .21$) and non-significant effects on task cohesion. When taken together, this suggests that team building interventions may, in fact, be more influential via other psychological (individual and group) processes than via the process of simply bringing people closer together and feeling more united.

Second, in terms of the *types* of team building interventions that were most effective, the results revealed that those that focused on goal-setting were most effective ($g = .71$), with other approaches such as adventure-based programs also demonstrating medium-sized effects ($g = .47$). Team building interventions also appeared to be effective regardless of whether they were delivered *directly* to the team by an interventionist ($g = .45$), or indirectly ($g = .41$) whereby the

interventionist worked with a coach or manager, who then delivered the intervention to the team. Finally, interventions were found to be increasingly more effective as the length of the intervention increased. Specifically, those that lasted less than 2 weeks resulted in non-significant effects, those that lasted between 2 and 20 weeks resulted in a medium-sized effect ($g = .50$), with those lasting longer than 20 weeks resulting in a slightly larger effect ($g = .56$).

As a complement to these findings Bruner, Eys, Beauchamp, Côté [9] recently conducted a citation network and genealogical analysis of team building interventions within sport settings. The study involved examining the most frequently cited team building texts (articles, books, chapters) in the sport psychology literature. The results revealed a predominant, and largely singular, emphasis of team building interventions being informed by a focus on developing group cohesion. While this might be considered unsurprising given its role as a central group dynamics construct, as Bruner and colleagues [9] note, other approaches to team building exist that include initiatives related to diagnostic (pre-screening) and evaluation procedures [3], goal setting [10], and personal disclosure and mutual sharing approaches [11,12]. Bruner and colleagues also noted how the team building literature in sport has largely ignored key texts within other areas of psychology (especially, organizational psychology), relying instead on a few key team building texts within the sport psychology literature. When taken together, the results of the Martin et al. meta-analysis and the Bruner et al. citation network and genealogical analysis suggest that team building interventions in sport demonstrate notable effects on bolstering team effectiveness outcomes, although a predominant focus on developing cohesion might be somewhat restrictive, and that other individual and group-based mechanisms (i.e., mediators) might act to foster improvements in team functioning.

Beyond Cohesion?: A Teamwork Approach to Team Building

So while most team building research in sport has primarily focused on developing cohesion, what other viable theory-driven evidence-based approaches might be used to develop and build teams? Within the field of organizational psychology, a considerable literature exists that centres on the importance of *teamwork*. It should be emphasized that teamwork involves more than simply building cohesion [13]. Teamwork represents “a dynamic process involving a collaborative effort by team members to effectively carry out the independent and interdependent behaviors that are required to maximize a team’s likelihood of achieving its purposes” [13, p. 233]. A key feature of this definition is that teamwork is comprised of multiple and measurable *behaviors*, and indeed within the organizational psychology literature group cohesion is considered an *emergent state* that derives *from* teamwork. Indeed, research within organizational settings suggests that when group dynamics interventions focus on developing improved teamwork those teams, in turn, tend to experience higher levels of cohesion [14].

Across settings such as medicine, the military, aviation and academia, interventions designed to enhance teamwork behaviors have been found to result in improvements in team effectiveness [15–19]. In sport settings, however, there has been a notable paucity of research on teamwork. Indeed, as Carron, Martin and Loughhead [20, p. 323] note “although some progress seems to be happening in business and the military, so far the nature of teamwork has not aroused much interest in sport”. In an attempt to draw from previous research and theoretical perspectives that have been used within other areas of enquiry (e.g., organizational psychology), as well as what is currently known about teamwork in sport psychology, McEwan and Beauchamp [13] recently conducted a theoretical and integrative review of teamwork in sport.

This review resulted in the presentation of an integrative conceptual model that drew from Mathieu et al.'s [21] prominent Input-Mediator-Output team effectiveness framework and Rousseau et al.'s [22] framework that was itself based on a comprehensive analysis of 29 frameworks that have been used to study teamwork in organizational settings. The focal part of this model focuses on the various teamwork behaviors that collectively support individual and team performance outcomes.

According to this model, and consistent with both Mathieu et al. and Rousseau et al., teamwork consists of two main components, the *Management of Team Maintenance* and the *Regulation of Team Performance*. The former is concerned with behaviors designed to keep the team together, whereas the latter is concerned with behaviors directed at achieving its instrumental objectives and goals. Management of team maintenance is comprised of behaviors focused on the interpersonal dynamics of a team, including the provision of *psychological support* (i.e., social support) to group members, as well as *conflict management* strategies. As highly effective teams pursue their respective goals, they have been found to go through a series of phases that include *preparation*, *execution*, *evaluation*, and *adjustment*. Collectively, these phases constitute the regulation of team performance. In their conceptual model, McEwan and Beauchamp identified a series of teamwork behaviors that align with each of those phases. Specifically, (i) preparation is comprised of behaviors conducted prior to team task performance, including 'mission analysis', 'goal specification', and 'planning', (ii) execution is comprised of behaviors that occur during task performance, including 'coordination', 'cooperation', and 'communication', (iii) evaluation is comprised of reflective behaviors that occur after task performance, including 'performance monitoring' and 'systems monitoring', and (iv) adjustment

is comprised of behaviors that occur in response to the evaluation phase, including ‘problem solving’, ‘backing-up’ other team members, ‘intra-team coaching’, and ‘innovation’[13]. In sum, this conceptual model of teamwork in sport was informed by an extensive review of research conducted within organizational settings as well as research conducted to date within sport.

In terms of next steps, and future research directions, two primary lines of enquiry require pursuit in sport. The first corresponds to the development of psychometrically sound assessment procedures for use with sport teams, related to the various management of team maintenance and regulation of team performance dimensions subsumed within the McEwan and Beauchamp model. To date, there have been few attempts to develop measures of teamwork in sport, most likely, as Carron and colleagues [20] note, because teamwork may simply be thought of as “what teams do” (p. 311). Some teamwork components have been subject to the development of assessment procedures, such as measures related to social support [23], as well as team performance profiling [24, 25] approaches that are designed to support performance monitoring. Other dimensions such as cooperation, innovation, and backing-up behaviors have not received such attention. When taken together, despite the intuitive appeal of understanding and, in particular, measuring teamwork in sport, to date research in this area has been quite fragmented [20].

A second direction for future research corresponds to the development and evaluation of teamwork interventions in sport designed to enhance and support both the management of team maintenance and regulation of team performance processes. For example, some research in sport has examined the effects of communication-based intervention initiatives in relation to team member functioning. Specifically, Beauchamp, Lothian and Timson [26] conducted a six month

intervention with an international-level co-acting sports team. The intervention centered on athletes completing a personality assessment battery and then using this assessment as a basis for helping participants to understand their own strengths and potential weaknesses, and effectively communicate with one another. The results revealed that the intervention served to build intra-squad trust, facilitated interpersonal interactions, and provided an important basis to support individual performance. Nevertheless, while this study provided some insights into the utility of the intervention it was limited by its case study design that focused on only one sport team. In future, communication-based teamwork intervention studies that use appropriately powered controlled experimental designs are required.

With respect to other behavioral constructs embedded within the McEwan and Beauchamp teamwork model, a few scholars have offered suggestions for how some of these dimensions might be enhanced [27], while others have conducted correlational research highlighting how, for instance, constructs such as intra-team conflict might be related to other psychological constructs such as group cohesion [28]. It should be noted, however, there has been a distinct paucity of experimental/intervention-based targeting these teamwork dimensions in sport. In contrast, within organizational psychology, a greater range of teamwork initiatives have been developed and tested. For example, a growing body of research has sought to examine the effects of different types of conflict management strategies, including (1) *avoiding*, (2) *collaborating*, (3) *competing*, (4) *accommodating*, and (5) *compromising* [29]. The relative efficacy of these different conflict management approaches have not, to our knowledge, been subject to empirical/experimental scrutiny in the sport domain. Indeed, when taken together, a critical area of future enquiry in sport is to examine the extent which management of team

maintenance (social support, conflict management) and regulation of team performance (preparation, execution, evaluation and adjustment) intervention strategies result in teams developing and becoming more effective in sport.

Conclusion

Although team building represents an important area of inquiry in sport psychology, past research on this subject has mostly centered on enhancing team cohesion. Research from other domains of group psychology suggests that additional mechanisms exist that can be harnessed to develop effective teams, such as those that center on various teamwork behaviors. By targeting these constructs, sport psychology researchers and practitioners have the potential to develop a better understanding of the ‘active ingredients’ that contribute towards building highly effective sports teams.

References and Recommended Reading

Papers of particular interest have been highlighted as:

* of special interest

** of outstanding interest

- [1] Evans MB, Eys MA, Bruner MW: **Seeing the “we” in “me” sports: The need to consider individual sport team environments.** *Can. Psychol.* 2012, **53**:301–308.
- [2] Collins JC: *Good to great: Why some companies make the leap ... and others don't.* HarperCollins; 2001.
- [3] Brawley LR, Paskevich DM: **Conducting team building research in the context of sport and exercise,** *J. Appl. Sport Psychol* 1997, **9**: 11–40.
- [4] * Carron AV, Spink KS: **Team building in an exercise setting.** *Sport Psychol.* 1993, **7**: 8–18.

This article presented a team building conceptual framework, for use within exercise settings, as well as the results of a team building intervention that involved providing exercise instructors with a workshop designed to illustrate how cohesion can be developed/enhanced in such settings. This paper has been highly influential in informing the development and delivery of team building interventions in both sport and exercise settings.
- [5] Carron AV, Spink KS, Prapavessis H: **Team building and cohesiveness in the sport and exercise setting: Use of indirect interventions.** *J. Appl. Sport Psychol.* 1997, **9**: 61–72.
- [6] Carron AV, Brawley LR, Widmeyer WN: *The measurement of cohesiveness in sport groups.*, Fitness Information Technology; 1998.
- [7] Carron AV, Coleman MM, Wheeler J, Stevens D: **Cohesion and performance in sport:**

A meta analysis. *J. Sport Exerc. Psychol.* 2002, **24**: 168–188.

- [8] ** Martin LJ, Carron AV, Burke SM: **Team building interventions in sport: A meta-analysis.** *Sport Exerc. Psychol. Rev*, 2008, **5**: 3-18.

This meta-analysis examined the effectiveness of team building interventions conducted in sport settings. The results revealed that team building interventions result in medium-to-large improvements in team effectiveness outcomes, although the effects on social cohesion were small and the effects on task cohesion were non-significant. This suggests that team building interventions may be more influential via other psychological processes than via the process of fostering cohesion.

- [9] ** Bruner MW, Eys MA, Beauchamp MR, Côté J: **Examining the origins of team building in sport: A citation network and genealogical approach.** *Gr. Dyn: Theory, Res. Pract.* 2013, **17**: 30–42.

This study examined influential texts (articles, books, and chapters) that provided the basis for team building research in sport settings. The study involved conducting a citation network analysis and a citation path analysis. The results indicated that team building research in sport has been informed by a predominant focus on targeting group cohesion, and how other approaches have largely been overlooked.

- [10] Senécal J, Loughhead TM, Bloom GA: **A season-long team-building intervention: Examining the effect of team goal setting on cohesion.** *J. Sport Exerc. Psychol.* 2008, **30**: 186–99.
- [11] Holt NL, Dunn JGH: **Guidelines for delivering personal-disclosure mutual-sharing team building interventions.** *Sport Psychol.* 2006, **20**: 348–367.
- [12] Crace RK, Hardy CJ: **Individual values and the team building process.,** *J. Appl. Sport Psychol.* 1997, **9**: 41–60.
- [13] ** McEwan D, Beauchamp MR: **Teamwork in sport: A theoretical and integrative review.** *Int. Rev. Sport Exerc. Psychol.* 2014, **7**: 229–250.

This theoretical and integrative review drew from the organizational psychology and team development literatures to present a multidimensional conceptual framework of teamwork in sport. This paper discussed how teamwork sits within a broader model of team effectiveness, and presented an overview of research on teamwork and team effectiveness in sport.

- [14] LePine JA, Piccolo RF, Jackson CL, Mathieu JE, Saul JR: **A meta-analysis of teamwork processes: Tests of a multidimensional model and relationships with team effectiveness criteria.** *Pers. Psychol.* 2008, **61**: 273–307.
- [15] Morey JC, Simon R, Jay GD, Wears RL, Salisbury M, Dukes KA, Berns SD: **Error reduction and performance improvement in the emergency department through formal teamwork training: Evaluation results of the Med Teams project.** *Health Serv. Res.* 2002, **37**: 1553–1581.
- [16] Smith-Jentsch KA, Cannon-Bowers JA, Tannenbaum SI, Salas E: **Guided team self-correction: Impacts on team mental models, processes, and effectiveness.** *Small Gr. Res.* 2008, **39**: 303–327.
- [17] Brannick MT, Prince C, Salas E: **Can PC-based systems enhance teamwork in the cockpit?.** *Int. J. Aviat. Psychol.* 2005, **15**: 173–187.
- [18] Prichard JS, Bizo LA, Stratford RJ: **The educational impact of team-skills training: Preparing students to work in groups.** *Br. J. Educ. Psychol.* 2006, **76**: 119–140.
- [19] McEwan D, Ruissen GR, Eys MA, Zumbo BD, Beauchamp, MR: **The effectiveness of teamwork training on teamwork behaviors and team performance: A systematic review and meta-analysis of controlled intervention studies.** *PLoS ONE.* 2017, 12: e0169604.
- [20] Carron AV, Martin LJ, Loughhead, TM: *Teamwork and performance.* In Murphy SN

(Eds): The Oxford handbook of sport and performance psychology (p. 309–327).

Oxford University Press; 2012.

- [21] Mathieu J, Maynard TM, Rapp T, Gilson L: **Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future.** *J. Manage* 2008, **34**: 410–476.
- [22] Rousseau V, Aube C, Savoie A: **Teamwork behaviors: A review and an integration of frameworks.** *Small Gr. Res.* 2006, **37**: 540–570.
- [23] Freeman P, Rees T: **The effects of perceived and received support on objective performance outcome.** *Eur. J. Sport Sci.* 2008, **8**: 359–368.
- [24] Butler L, Hardy RJ: **The performance profile: Theory and application.** *Sport Psychol.* 1992, **6**: 253–264.
- [25] Weston, N., Greenlees, I. Thelwell: **A review of Butler and Hardy's (1992) performance profiling procedure within sport.** *Int. Rev. Sport Exerc. Psychol.*, 2013, **6**: 1-21,
- [26] Beauchamp MR, Lothian JM, Timson SE: **Understanding self and others: A personality preference-based intervention with an elite co-acting sport team.** *Sport Exerc. Psychol. Rev.* 2008, **4**: 4-20.
- [27] Eccles DW, Tran KB: **Getting them on the same page: Strategies for enhancing coordination and communication in sports teams.** *J. Sport Psychol. Action.* 2012, **3**: 30–40.
- [28] Sullivan PJ, Feltz DL: **The relationship between intrateam conflict and cohesion within hockey teams.** *Small Gr. Res.* 2001, **32**: 342–355.
- [29] Thomas KW: **Conflict and conflict management : Reflections and update.** *J. Organ.*

Behav. 1992, **13**: 265–274.